



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,655	10/24/2003	Anton Krantz	M1103.70193US00	9660
45840 7590 06/22/2007 WOLF GREENFIELD (Microsoft Corporation) C/O WOLF, GREENFIELD & SACKS, P.C. 600 ATLANTIC AVENUE BOSTON, MA 02210-2206			EXAMINER DUNN, DARRIN D	
			ART UNIT 2153	PAPER NUMBER
			MAIL DATE 06/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/693,655

Applicant(s)

KRANTZ ET AL.

Examiner

Darrin Dunn

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 2109

DETAILED ACTION

1. This Office Action is responsive to the communication filed on 10/24/2003.
2. Claims 1-40 are presented for examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 recites the limitation "the accumulated network information." There is insufficient antecedent basis for this limitation in the claim. Although network interface information is acquired, it is possible that this information is not accumulated.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2,4-8, 12, 15-17,19-21, 25,26, 28-34, 38, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelis et al. (USPN 7065367).

Art Unit: 2109

7. As per claims 1 and 28, Michaelis et al. teaches a computing system supporting network selection based upon network information spanning multiple communication media ([Col. 10, lines 23-54], [FIG 1,2,3], SUMMARY), the system comprising:

a rules data store ([Col. 4, lines 13-15], [Col. 7, lines 22-30] – access control list) for maintaining network selection criteria;

a media specific module interface ([Col. 6, line 29 –communication application) facilitating acquiring network interface information ([Col. 6, lines 30- traffic meta data]) potentially spanning multiple communication media ([FIG 1 , 14A-G) associated with a set of networks to which the computing system is capable of connecting ([FIG 6 –78]) via a set of network interfaces ([FIG 6 – 70,72,76]; and

network selection logic for designating one of the set of networks ([FIG. 6 –74 e.g., interface priority entails designating one network over another] by applying a network selection criterion ([FIG. 6- 68] from the rules data store ([Col. 9, line 67] e.g., access control list) to the accumulated network interface information ([Col. 6, lines 33-35 –meta-data (accumulated interface information) is inputted into ACL).

8. As per claim 2, Michaelis et al. teaches the system of claim 1 wherein the media specific module interface and the network selection logic are associated with a rules engine ([Col. 6, lines 21-25 –processor, i.e., rules engine, accesses interface selection rules, where the ACL embodies rule classes. An association is present because the processor applies network selection rules/selection using the meta-data accumulated from the communication application).

9. As per claim 4, Michaelis et al. teaches the computing system of claim 1 further comprising a set of media specific modules ([Col. 6, lines 5-8 – modem modules) configured to

Art Unit: 2109

acquire network interface information ([Col. 6, lines 5-8 – connection states) pertaining to network interfaces associated with particular media types ([Col. 6, lines 5-8] e.g., modem modules, i.e., media specific module, acquires connection states associate with particular access points –media types. Access points are depicted in FIG 1 (multiple media)).

10. As per claims 5, 19, and 32, Michaelis et al. teaches the computing system of claim 4 wherein the media specific modules acquire network interface information from media specific drivers (Col. 6, line 5 –modem controller controls modem modules and monitors status and connection states –network interface information) associated with particular network interfaces.

11. As per claims 6, 20, and 33, Michaelis et al. teaches the computing system of claim 1 wherein the multiple communication media includes at least a wireless wide area network media and a wireless local area network ([Col. 3, lines 25-30] – long range wireless access (wide area network | short range access (wireless local area network))).

12. As per claim 7, Michaelis et al. teaches the computing system of claim 6 wherein the wireless local area network includes one or more of the 802.11 wireless protocols ([Col. 3, lines 18 –20, 25-30]).

13. As per claims 8, 21, and 34, Michaelis et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order ([Col. 7, lines 12-15 – dynamic prioritizing) between at least two media ([FIG 3 –interface 0 –N]) based upon a network parameter ([Col 7, lines 25-29 - cost, latency, QoS] associated with the media.

14. As per claims 12,25, and 38, Michaelis et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order ([Col. 7, lines 12-15 –

Art Unit: 2109

dynamic prioritizing) based upon a time parameter ([Col. 7, line 26] e.g., latency. Note: It is understood that latency, cost, and the like are employed in the prioritizing process).

15. As per claims 13, 26, and 39, Michaelis et al. teaches the system of claim 1 wherein the network selection logic is incorporated into a state machine ([Col. 8, lines 17-20, 2-5] e.g., a state machine, i.e., processor, is interpreted in this manner because the processor tracks the connection states. It is implied that when one connection state changes to another, the processor makes that determination by comparing a current and previous connection state) that cyclically scans ([Col. 8, 2-5 – tracking connection states) a set of network interfaces for networks ([Col. 8, lines 2-5, 17-20], [FIG 1]).

16. As per claim 15, Michaelis et al. teaches a method for selecting a network and interface combination to which a computing system will initiate a connection via the network interface, based upon network information spanning multiple communication media ([SUMMARY], [FIG 1]) and the method comprising:

- accessing a network selection criterion ([FIG 6],[COL 4, lines 13-15], [Col. 7, lines 22-30] e.g. modified access control lists);

- accumulating network interface information ([Col. ([Col. 7, lines 28-32 –meta-data (accumulated interface information) is stored in ACL) potentially spanning multiple communication media associated with a set of networks to which the computing system is capable of connecting via a set of network interfaces ([FIG 4], [Col. 7, lines 25-34])

- designating one of the set of networks and a network interface ([Col. 7, lines 30-35] – prioritizing interfaces) from the set of network interfaces [FIG 3] by applying a network

Art Unit: 2109

selection criterion to the network interface information [FIG 6-(66-78)] potentially spanning multiple media [FIG 1])

17. As per claims 16 and 29, Michaelis et al. teaches the method of claim 15 wherein the network selection criterion is accessed from a configurable rules data store ([Col. 8, line 47] e.g., modified access control lists).

18. As per claims 17 and 30, Michaelis et al teaches the method of claim 15 further comprising issuing network interface configuration instructions in accordance with the designating step ([Col. 8, lines 17-27] e.g., configuration instructions interpreted as selecting the appropriate interface by prioritizing the interface –dynamic prioritizing).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2109

21. Claims 3, 18, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelis et al (USPN 7065367).

22. As per claim 3, Michaelis et al. teaches the computing system of claim 2, but does not teach where the media specific module interface ([Col. 6, line 29] – communication application) comprises a normalization module (FIG 2 – Interface 28A-N)) that receives requests from the rules engine directed to network interfaces ([FIG 2 – processor -16 is in communication with Interfaces 28A-N)

However, Michael et al. teaches that the communication application may run on the AT, or another device coupled to AT 12 ([Col. 6 –line 29] Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to combine the normalization module – Interface 28A, i.e., another device coupled to AT12, with the media specific module – communication application. Since the communication application transfers meta-data regarding the network, and given that both the modem module, interface, and communication application may be combined ([Col. 6- line 16]), a more simplistic and integrated design is realizable.

23. As per claims 18 and 31, Michaelis et al. as modified teaches the method of claim wherein the accumulating step [Col. 6, line 31 – meta-data] is facilitated by a normalization module [FIG 2- Interface 28A in communication with processor) interposed between a set of media specific modules [FIG 2 – Interface is located between Modem Modules and Processor] associated with potentially multiple distinct types of communication media drivers ([Fig. 2 –19 – modem modules associated with modem controller]) and a rules engine that performs the designating step ([Col. 6, lines 5-8], [Col. 6, lines 21-25], [Col. 7, lines 25-28] e.g., modem controller, i.e., driver associated with multiple communication media, collects connection state

Art Unit: 2109

information where rules engine – 16, is associated with processing and assigning priorities based upon collected meta-data)..

24. Claims 9, 11, 22, 24, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelis et al (USPN 7065367) in view of Dharmadhikari et al. (USPN 2003/0065816).

25. As per claims 9, 22, and 35, Michaelis et al. teaches the limitations of claim 15 except it does not teach where a network selection criterion involves a preference order between at least two media based upon a network type associated with the media. Dharmadhikari et al teaches selecting a network type based upon preferences ([0044], [0004]).

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to include as the selection process a network type. Michaelis et al. provides for the implementation of a network selection criterion, and in addition provides for the ability to interface with a variety of networks. In effect, since each network may offer inherent advantages over one network, it would have been obvious to have modified Michaelis et al. to further include selecting a particular network type.

26. As per claims 11, 24, and 37, Michaelis et al, as modified, provides for a preference order between logical networks ([FIG 1] e.g., WCDMA and CDMA2000 are interpreted as logical networks).

27. Claims 10, 23, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelis et al (USPN 7065367) in view of Davenport (USPN 2002/0082044).

28. As per claims 10, 23, and 36, Michaelis et al. provides for a selection criterion in choosing a particular network; however, it does not teach where the preference is based upon a

Art Unit: 2109

current location of the computing system. Davenport teaches for the selection of a wireless network based upon the location of a radio [0007].

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to select a network based upon the location of the computer. Since latency is a concern, minimizing distance would offer an advantage of reducing latency. In effect, an additional benefit would be realized by including the mobile location within a preference list as to minimize latency.

29. Claim 14, 27, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelis et al (USPN 7065367) in view of Castet (USPN 4088840).

30. As per claims 14, 27, and 40, Michaelis et al. teaches a computing system of claim 1 further comprising a scanning engine associated with a network ([history ([Col. 8, lines 2-5], [Col. 7, lines 40-45 e.g., scanning engine, i.e., a processor monitors the connection states based on previous scan results, i.e., implied during a change of connection status. It is implied that a scanning history is maintained in order to realize a connection change has occurred by comparing a current connection to a previous connection). However, Michaelis et al does not teach a cyclical scanning algorithm. Castet teaches a cyclical scanning algorithm (Fig 1b – busy – not busy) for monitoring occupied and communication request conditions).

Therefore, at the time the invention was made one of ordinary skill in the art would have motivation to include cyclical scanning as part of monitoring the connection status as taught by Michaelis et al., supra modem controller. Since the mobile device is known to roam among different networks, cyclical scanning provides a means to detect changing network connections.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6801777 – intelligent wireless communication selection

20020065941 – universal communication connector

20030058884 – selection process based on time of day

20030065816 – user-preferred network interface switching

20030100308 – intelligent wireless communication selection

20040077341 – multi – interface mobility client

20040131078 – interfaces for multiple wireless technologies

20050009525 – wireless phone interface to different networks

20070076665 - method for seamless roaming

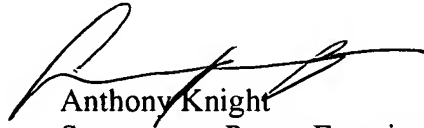
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darrin Dunn whose telephone number is (571) 270-1645. The examiner can normally be reached on EST:M-R(8:00-5:00) 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2109

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD
05/25/2007



Anthony Knight
Supervisory Patent Examiner
Art Unit 2121